

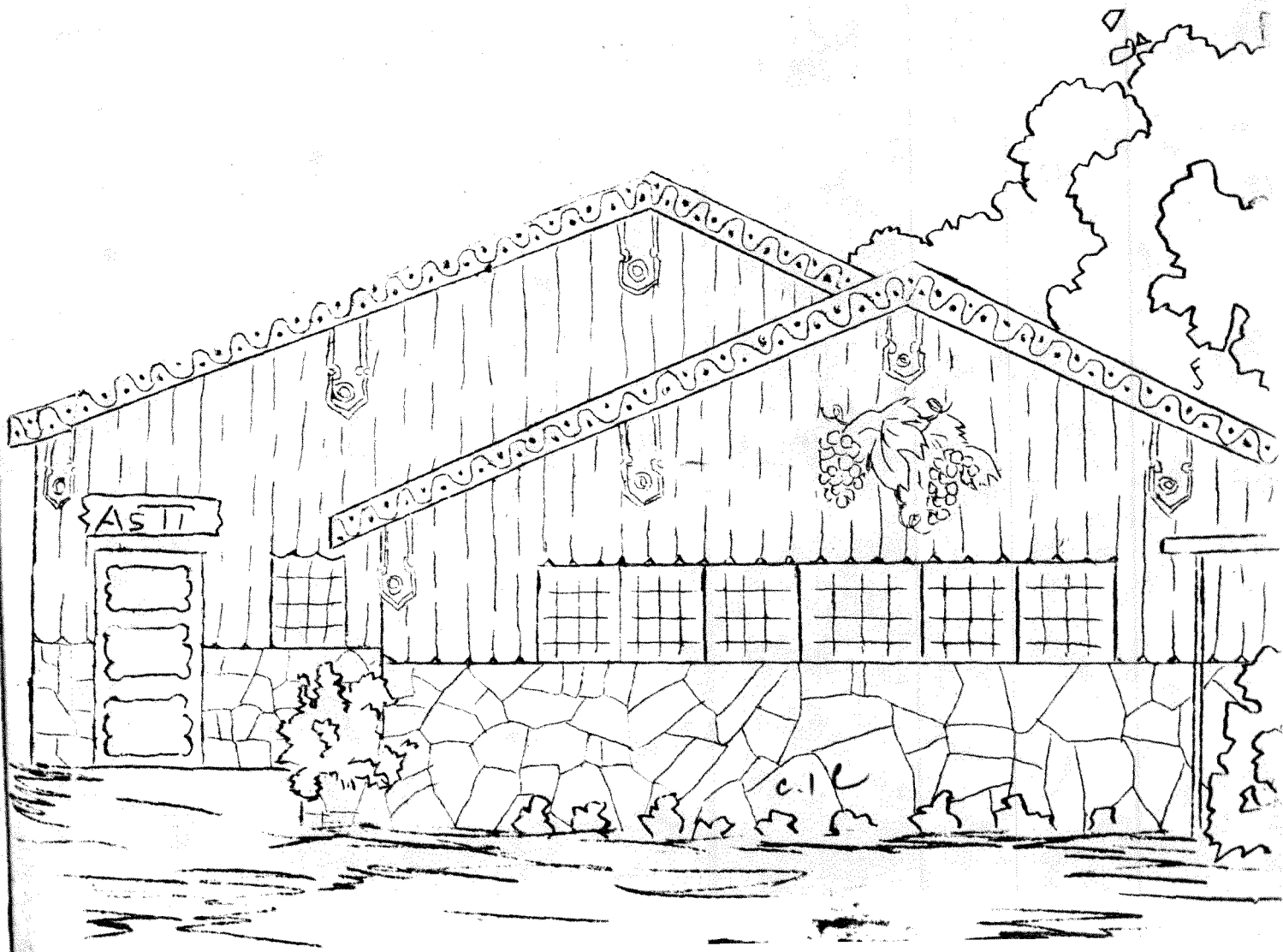
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STORY

# The Story of ITALIAN SWISS COLONY



## THE HISTORY OF ITALIAN SWISS COLONY

San Francisco, in 1880, was a sober town. The great depression of the seventies had crippled its business and thrown thousands of its people out of work. The unemployed, in their desperation, had turned to radical leaders who at one time threatened the city's destruction. Now recovery had begun and the era of radicalism had passed.

But the scars remained and so did many of the unemployed. Among them were hundreds of Italian and Swiss immigrants who had been lured to California by the glowing promises of steamship agents. The plight of these immigrants attracted the attention of Andrea Sbarboro, a leader in the city's Italian colony. Out of his interest grew an institution which has become a business landmark in California.

Sbarboro had come to San Francisco in the early 1850's at the age of 13 and gone to work in his brother Bartolomeo's grocery store. In 20 years he had acquired his own store and become moderately successful. Then the banking collapse brought on by the panic of 1873 had opened a whole new career to him.

The constriction of credit resulting from the financial crisis had encouraged formation of mutual loan associations through which the members might finance their own needs. Sbarboro organized and became manager of such an association in 1875; it was the first of five that he founded, which handled \$6,500,000 in receipts and financed the building of 2500 homes in the San Francisco area.

The grocer-turned-banker conceived the idea of applying the building and loan principle to the problem of the jobless immigrants. The bulk of them, Sbarboro knew, were peasants whose best hope of success lay in returning to the land. There was plenty of good land in California. All that stood between the immigrants and the land was money. Sbarboro set out to get the money.

He went to the friends who had helped him launch his mutual loan association and made a proposition. Let each of them contribute a little each month to a fund with which to buy a tract of land to be worked by the immigrants. Let each immigrant contribute at least \$5 a month from his wages to the fund. After a set period of years let each immigrant use his accumulated contributions plus any dividends to buy a portion of the tract, thus liquidating the project and paying off the original investors.

Sbarboro's friends agreed and by-laws were drawn up providing that "This association shall be known as the Italian Swiss Agricultural Colony, and its objects shall be to buy and sell agricultural lands for colonial or other purposes, or to cultivate the same..." All permanent employees were to be members of the association and preference was to be given to Italians and Swiss who either were or intended to become citizens.

On March 12, 1881, the Colony was incorporated and Italian and Swiss businessmen in San Francisco subscribed 2250 dollar-a-month shares. After \$10,000 had been accumulated, Sbarboro and two of his associates began surveying likely sites for the Colony. More than 40 sites were examined before they settled on a 1500-acre tract of pasture land in Sonoma County, 90 miles north of San Francisco.

The land, situated on gently rolling hills in the Russian River Valley, was ideally suited to vineyards, and the Colony's directors had the growing of grapes in mind since most of the immigrants had been vineyardists. The countryside reminded them of Northern Italy, where most of the immigrants had come from, so they named their tract Asti, after the region in Italy.

The Colony paid \$10,000 down on the land and agreed to pay off the \$15,000 balance in thousand-a-month installments from their subscription income. Sbarboro set men to work clearing the hills of trees, and one of the Colony's directors arranged to import grape cuttings from Italy, France, Hungary and Germany.

When the land was ready for cultivation, Sbarboro invited the city's jobless Italians and Swiss to a mass meeting. He explained the purpose of the Asti project and made the men an offer---for each of them, board, room and \$35.00 a month in return for his labor. Each would be required to subscribe at least \$5 a month toward building his equity in the land. In the end, each man would be an independent farmer, having acquired his land on the installment plan.

To Andrea Sbarboro's surprise, the suspicious peasants refused his offer. The Colony's directors explained it several times over without success. No man would take a chance, though they all expressed a willingness to work. Sbarboro little dreamed at that time that 75 years later his original plan for the land would finally become a reality and the Colony would in fact become wholly owned by the growers and producers of the grapes.

Having already bought the land, the directors decided to go ahead anyway. They agreed to keep up their monthly subscriptions and operate Asti as a private venture. Several hundred jobless immigrants were set to work planting grape cuttings and building living quarters for themselves.

By the time the vineyard matured and the first big grape crop was ripening, the price had fallen from \$30 to \$8 a ton, which was less than the cost of production. Threatened with ruin, the Colony's directors made a momentous decision. They decided to "store" their perishable crop by turning it into wine.

A \$10 assessment was voted on each of the Colony's 2250 shares, and with the \$22,500 thus raised, a stone winery of 300,000 gallons capacity was built in 1887. The Colony's first grape crush was also its worst--due to mishandling, the wine turned to vinegar.

After seven years of subscription, the Asti Colony was still a failure, but Sbarboro's friends stood by him. Pietro Rossi, a San Francisco druggist who had studied winemaking in Italy, was sent up to take charge. From the day of his arrival in 1888, the Colony dated its success, though it had to undergo one more crisis.

The first wines Rossi turned out proved to be excellent and the directors could at last foresee some return on their investment. But they reckoned without the fluctuations in the wine market. The wholesale price offered for Asti wines proved to be as far below a profitable level as the price offered for Asti grapes.

The Colony gambled once more. They had already gone from philanthropy to farming to winemaking, so they took one more step and became their own wholesalers. Italian Swiss Colony opened office and wine vaults in San Francisco, Chicago, New Orleans and New York and set out to market their wine direct to the retail trade.

Asti wines caught on immediately and Sbarboro, Rossi and their associates pushed ahead with a program of expansion, buying more land and making more wine. All profits were ploughed back into the Colony and it did not pay its first dividend to members until 1897. By that time the organization had agencies in scores of American cities and more than a dozen foreign countries.



Asti had become an established community with its own post-office, railroad station, school and church. Its laborers, most of them Italians, had built homes and raised families around the winery. The directors, proud of what had been accomplished, began to build summer homes in the valley and to make a social center of Asti.

No West Coast visit by members of Europe's nobility was complete without an inspection of Asti and an outdoor banquet of stunning proportions with Sbarboro playing host. The winery's guest book was studded with the names of great personages from Europe as well as the United States.

Andrea Sbarboro's summer home at Asti exceeded all the rest. On a trip to Italy, he had visited Pompeii and seen the famous Casa de Vetri. He secured a copy of its floor plan and duplicated the Pompeiian villa on the banks of the Russian River. Then Sbarboro added a characteristic personal touch.

He installed an elaborate underground sprinkler system. Its purpose was to sprinkle not his trees but his guests, for Sbarboro was an inveterate practical joker. The grounds of the estate became a maze of hydraulic boobytraps for the unsuspecting.

→ One of the sprinklers was hooked up within a stone grotto equipped with hammocks. The guest who flopped down to rest in the wrong hammock automatically gave himself a shower. Sbarboro loved outdoor banquets during the summer at which it was possible to shower his guests while he sat dry and roaring with laughter at the head of the table. Frequently his sons arranged the setting so that Sbarboro himself was doused.

The treacherous sprinkler system at Asti was obviously copied from one built by Maëcus Sittich, Archbishop of Salzburg, at his 17th century palace, Hellbrun Gardens, and which was fed by 116 underground springs. Sbarboro, however, had improved on Hellbrun for the Archbishop's sprinklers had to be turned on by hand, while the banker's operated by pressure valves.

In the course of becoming one of the world's largest wineries, Asti had not sacrificed quality. Within four years of the time that Pietro Rossi took over the winemaking for the Colony, it had won its first gold medals in competition. Many of the awards came from American fairs and expositions, but the ones that pleased the directors most were those won in competition with European wines abroad.

Prejudice against American, and particularly California, wines was strong in Europe and such exhibitors competed under a heavy disadvantage. Despite it, Asti wines won gold medals at Genoa in 1892, at Dublin the same year, at Bordeaux in 1895 and at Paris in 1900. Diplomas of honor were conferred upon the Colony's wines at the original Asti and at Turin in 1898 and at Milan in 1906.

Then, in 1909, Pietro Rossi undertook an experiment which resulted in one of Asti's greatest triumphs. Having noted an increase in sparkling wine sales, he decided it was time to expand the Colony's champagne production. In the course of a visit to France with his twin sons, Rossi stopped off in Rheims, in the heart of the champagne country. There he met Charles Jadeau, a noted champagne maker, and persuaded him to come to California.

When the news of Jadeau's departure became known, reaction in France ranged from outraged indignation at Jadeau for his desertion to ridicule of Rossi for thinking he could duplicate French wines. The Paris newspaper, Le Petit Journal, devoted a long editorial to the subject.

"The Americans are wrong," the paper wrote, "when they think they can do everything better than anyone else, and that nothing is impossible to them. The fact is that there are still in this world many, many things which they can never achieve. For example, they have not been able to manufacture champagne or even produce a sparkling wine that suggests the champagne of France."

This, the editorial continued, was not for lack of trying. Americans had imported the methods, the grapes, the yeast and done everything possible to duplicate champagne, even to luring over champagne experts "by spanning the ocean with a bridge of gold." But despite these efforts, "the champagne of California has turned out to be frightfully sour wine, only fit for German troopers.

"Alas," Le Petit Journal concluded, "the imitators of champagne have forgotten one important thing, the soil of France with its subtle sorcery."

Rossi ignored the blast and returned to California with Jadeau. He unfolded his plan to the Italian Swiss Colony's directors and they authorized the building of a new champagne plant with the finest equipment obtainable. A blend of Asti's finest white wines was made by Jadeau and 150,000 bottles of champagne were laid down in the Colony's cellars.

A year later, a few experts were invited up from San Francisco for a tasting. Rossi and Jadeau anxiously opened a few bottles. The wine had all the sparkle and flavor they had hoped for, and the experts pronounced it excellent. The Colony's directors ordered production expanded once more, and put their champagne on the market under a new label, Golden State Extra Dry.

Convinced that he had something to show skeptical Europeans, Rossi decided to exhibit his champagne at the international exposition in Turin, Italy, in October, 1911. With Sbarboro's encouragement, a selection of Golden State was made and sent off to Europe.

The judges at Turin, among the most celebrated connoisseurs in Europe, were noted for their prejudice against American wines, but they promised an impartial decision. After seven days of tasting and arguing together, they finally announced their judgment. Golden State had been awarded the Grand Prix, the highest award possible, and the first time a California wine had been so honored.

Pietro Rossi never lived to learn that his new champagne had been so well received. While riding near his home at Asti, he was thrown from his horse and killed on October 9, 1911. The news of the award at Turin did not reach California until late in the month of October.

With the death of Rossi, one of the two great figures in the development of the Italian Swiss Colony had been removed. The management of the winery itself was carried on by Rossi's twin sons, Edmund and Robert, who had learned winemaking from their father's example. Andrea Sbarboro, then head of the Italian American bank in San Francisco, remained secretary of the Colony and split his efforts between banking and promoting the wine business.

Sbarboro, during the first decades of the twentieth century, found himself and his Colony confronted by an enemy of imposing size--the national prohibition movement. The movement, though aimed primarily at eliminating drunkenness, posed an obvious threat to Asti and to Sbarboro's way of life. He counterattacked with a barrage of speeches, pamphlets and appearances before congressional committees.

Whatever the earnest women of the temperance movement may have thought of him, Sbarboro considered himself a true temperance

advocate. He proclaimed his eagerness to end drunkenness from every available rostrum. But his method lay in converting the hard drinker to light wines while the prohibitionists sought to impose temperance by drying up all alcoholic beverages.

To prohibit the use of wine through prohibiting the use of alcohol struck Sbarboro as insane. He sincerely believed, and produced the word of learned authorities to prove, that wine was beneficial to health, an aid to digestion and a necessary ingredient of the good life.

He argued that those states which already had prohibition suffered more from drunkenness than they had before, and that therefore prohibition was no easy road to temperance. He suggested that America could achieve temperance overnight by switching from whiskey to wine and, incidentally, by cutting out tea and coffee.

Sbarboro's cure for the chronic drunk was unique. Every arrested drunk was to be sentenced to 30 days in jail and served light wines with his meals. Upon his release, Sbarboro believed, the fellow would be converted to temperance and an appreciation of wine, and would henceforth abstain from hard liquor. Backsliders were to be given 60-day sentences and the same therapy.

He advocated following the example of France and Italy and providing every man in the armed services with a daily wine ration. The wine-drinking countries of Europe, he argued, had little drunkenness, and America should learn from their temperate example. He cited passages from the Bible to prove that wine was the favorite drink of the prophets and often he declared his belief that biblical evidence proved the Deity was not a prohibitionist.

In his appearance before Congress, Sbarboro was fond of declaring that if his crusade succeeded he could die happy and have engraved on his tombstone the epitaph---"Here lie the bones of Andrea Sbarboro who first sowed the seeds in the halls of Congress which removed drunkenness from the United States." The seeds, of course, were: Down with prohibition and whiskey, up with wine and temperance!

He once scandalized a WCTU delegation at a congressional hearing by a well meant suggestion. The women, he said, might best insure against their children growing up to be drunkards by starting them off in the highchair with a tippie of half wine and half water.

Whiskey distillers resented Sbarboro's method of fighting prohibition at their expense and even attempted a boycott of Asti's products. Others were amused by his crusade, but not the temperance forces. For whatever his logic or the merit of his arguments, he was three times credited with defeating national prohibition bills before Congress.

Sbarboro, of course, was only fighting a delaying action and he himself finally realized it. On the eve of World War I he withdrew from the wine business, convinced at last that national prohibition was coming to America. Within three years prohibition arrived and the Colony's operations were brought to a halt. Sbarboro died in 1923 at the age of 83, presumably of influenza, but possibly of disgust at the sight of his beloved Asti meekly bottling grape juice for teetotalers.

In 1920 Pietro Rossi's sons, Edmund and Robert, together with Enrico Prati, who had worked up from the ranks of Asti's laborers, revived the Italian Swiss Colony. They kept it going throughout the prohibition era by selling grapes and grape juice. Then, a decade after Sbarboro's death, came repeal. The Rossi's and Prati plunged into a program of expansion which, within a few years, returned Asti to the ranks of the world's largest wineries.

Along with this growth went a strict adherence to the traditions of quality Pietro Rossi had originally established, traditions which have won the Colony more awards for excellence than any other California vintner.

With the coming of World War II, governmental needs for alcohols for defense purposes were increased tremendously. In order to insure a continued source of alcohol for beverage purposes, many major distilling companies began to look towards the wine industry with its abundant potential. One by one, most of the larger wine companies and many of the smaller ones were leased or purchased outright by these large and wealthy distilling interests. In 1942 the Rossi's and Prati sold Italian Swiss Colony to National Distillers Corporation, who continued to operate it until the war was over and won. During this regime the great LA PALOMA winery at Clovis, California, (near Fresno) was purchased and added to the growing Italian Swiss Colony as was the well known S & J (Shewan Jones) winery at Lodi, California. Addition of these two wineries, both located in the heart of the finest sweet wine grape producing region of California, was to allow the company to concentrate

its production efforts in the area in which the grapes were grown. It had been the practice in the past to ship the varieties of grapes which were grown in the central valleys to Asti in gondola cars to be crushed and made into wine there. Now it was possible to efficiently produce only table wines in the great Asti winery which is located in the heart of the table wine grape growing area, and sweet wines in the Lodi and Clovis wineries, which are in the dessert wine grape belt.

By the early 1950's the California wine industry could foresee the probability of tremendous post-war growth. The large distiller owners, however, had come to realize that the production and merchandising of wine was not particularly akin to similar functions of the distilled beverage field and in spite of the optimistic future of wine, the distillers, for the most part, decided to limit their activity to their traditional specialties and offered the wineries up for sale. It is possible that they had come to understand better Andrea Sbarboro's philosophy of temperance with moderate use of wine during their few short years of association with the wine industry. In 1953 National Distillers sold ITALIAN SWISS COLONY to an organization of vintners which was known as UNITED VINTNERS INC. United's history dated back to 1886, when it was established by Raffello Petri with the purpose of buying and selling wines, and over the years it has experienced growth and expansion similar to that of the Colony to the point where, by 1953, it was the owner of several large wine companies in the large sweet-wine producing central valley of California.

United Vintners had been closely associated with the establishment in 1951 by 240 grape growers, and the subsequent rapid growth of a grape growing cooperative called ALLIED GRAPE GROWERS. Between the years of 1954 and 1959 United Vintners sold or leased several of its plants to the cooperative which was destined to become the largest producer and merchant of wine in the entire world.

The final culmination came on September 1, 1959, with the outright purchase of all holdings of United Vintners by ALLIED GRAPE GROWERS, which by then had grown to include almost 1300 grower-members. This transaction gave the growers complete ownership of all the former United Vintners wineries and bulk storage plants which had a total capacity of about 55,000,000 gallons and a weekly grape crushing capacity of 45,000 tons. It also gave the growers sole ownership of all wine brands and labels formerly owned by United Vintners as well as the large specially constructed ship, the S.S. Angelo Petri, which could carry 2,500,000 gallons of wine in its stainless steel tanks plus 1,560,000 gallons of other types of liquid cargo.

The wineries located at Asti, Clovis, Lodi, Madera and Escalon, the storage plants located at Stockton, Newark, Houston and Chicago, and the bottling facilities in Chicago and Newark all came under the ownership of the grape growers, and thus was finally realized the original dream of Andrea Sbarboro, over 75 years after its inception, whereby the growers of the grape would be the sole producers of the wines which bring fame to ITALIAN SWISS COLONY. Today ALLIED GRAPE GROWERS is the world's largest grape and wine growing cooperative, and one of the world's largest agricultural cooperatives.

#### CHAMPAGNE DEPARTMENT

Champagne, Pink Champagne, and Sparkling Burgundy are all produced in our Champagne Department, the method used in their production being somewhat different than that used in the production of still wines. Champagne is made from a carefully selected blend of white aged still wines which are called CHAMPAGNE MATERIALS. Sparkling Burgundy and Pink Champagne are produced from similar bases with the exception that they are red or pink wines as the case may be. SPARKLING WINES are wines in which the natural carbonation from fermentation has been held or imprisoned. They differ from still wines where all carbonation is allowed to escape as these wines are fermented. Each bottle of sparkling wine produced at Asti will have about 112 lbs. of pressure per square inch, (at room temperature of 68 degrees F), this pressure or "sparkle" being in its entirety natural carbon dioxide which was created as the wine fermented, and being in no way an artificial pressure or carbonation as commonly found in soft drinks.

There are two generally used methods whereby sparkling wines are produced, namely the "Bulk (or Charmat) process" and the "Bottle Fermented" method. Under the first method, fermentation of the champagne materials is accomplished in large completely sealed tanks or containers. Under the older "Bottle" method, fermentation of the champagne takes place in the individual bottle which eventually reaches the consumer. Both methods are in use in all champagne producing regions of the world, and each has its certain advantages. We prefer and use the more modern Bulk Process method for many reasons. First of all, handling comparatively larger quantities permits a much more uniform quality than is possible in the other method, where each bottle is individually produced. Greater efficiency with much less hand labor is permitted by the Bulk method; we actually handle each bottle only nine times during the entire process, whereas over two hundred separate handlings are



required during the bottle method. The resulting lower costs of production allow premium quality sparkling wine at more reasonable prices than is possible by the older process.

In the production of Champagne using the Bulk Process method the champagne materials are first brought into the Champagne Department and are placed in special blending tanks. To this champagne material is added a measured amount of pure yeast, carefully cultured in special tanks in the Champagne Department and of the most desirable strain so as to guarantee complete fermentation. Also, a quantity of cane sugar is added which will serve as food for the yeast during the period and process of fermentation. After thorough mixing in blending tanks, the mixture of wine, yeast, and sugar is pumped into special completely sealed fermenting tanks to rest until the process called "secondary fermentation," which converts the still wine base into an effervescent sparkling wine, has completed its cycle. Gradually the yeast and sugar convert into alcohol and carbon dioxide gas; a process which usually takes from eight to fourteen days. Since the fermenting tanks are completely sealed, the  $\text{CO}_2$  which is created within the tank cannot escape so it remains in the tank and builds up more and more pressure. The skill and experience of the champagne makers is called upon to guarantee complete and proper fermentation so that just the right amount of sparkle remains in the wine after fermenting is completed.

There are 14 of the specially constructed fermenting tanks on upright stands in the rear room, each with somewhat over 900 gallons capacity. Each is built and guaranteed to withstand pressures up to 150 lbs. per square inch and temperatures to 200 degrees F. Each has an interior tank of stainless steel or glass-lined steel which is surrounded by a thick and exceedingly strong iron jacket. Between this jacket and the outside shell is insulation of fibreglass or cork. Water jackets are built into the tank through which water or brine can be circulated to control the temperature of the fermenting wine at all times. By the time fermenting is complete, there will be a pressure of about 112 lbs. per square inch (at 68 degrees) within the tank.

Refrigeration is then applied for perhaps ten or twelve days so that the temperature of the champagne is reduced to 22 degrees F. During this chilling the newly created natural carbon dioxide gas gradually becomes absorbed into the wine thereby producing the bubbles so distinctive in sparkling wine. These bubbles will remain locked in the wine until their release when the bottle is opened, the wine poured, and the wine warmed in the open glass.

After the fermentation and chilling processes, the wine is ready for transfer from the tank to the bottle, an operation which must be done while the wine is still at 22 degrees F. so that the pressure can best be controlled without danger of loss. It would be, of course, almost impossible to bottle champagne at room temperature without some loss of pressure, but the chilling of the wine to 22 degrees brings a proportionate lowering of pressure to about 60 lbs. per square inch. The modern bottling equipment in the front room of the champagne department has been designed to handle that pressure easily with no loss. As a first step towards bottling, the chilled champagne is pumped through a completely sealed filtering unit of stainless steel and then into another sealed tank previously prepared by chilling and pressurizing so that it has the same pressure and temperature as the champagne it is to receive. Every precaution is taken so that there is no possible loss of the natural carbon dioxide during the journey from the fermenting tank to the bottle. After filtering, the champagne is again carefully rechilled to exactly 22 degrees and pumped through stainless steel pipes to the filler.

Bottles are new, of the latest design, and are exceptionally strong; so much so that the "push" or indentation once needed in the bottom of the bottle to strengthen it has been all but eliminated. Bottles are fully tested by the manufacturer before they reach us. They are also completely sterilized and packed in new containers, imprinted with our name, which will be used for the eventual shipment of the champagne. We, in turn, rewash the bottles, sterilize and dry them mechanically. They are then placed in the filler where they are tested just before chilling to an air pressure of about 85-100 lbs. per square inch. Nitrogen is then introduced into the bottle, forcing out all air to insure against possible later oxidation of the delicate sparkling wines. During filling the champagne is not poured into the bottle, but rather is allowed to flow downward along the inside of the bottle sides so that no foam or froth is introduced into the bottle, thereby preventing any possible pressure loss.

The automatic filling machine which is in use at Asti is the most modern champagne bottling filler to be found anywhere in the world. It was brought from Germany, new, in 1955, is constructed entirely of stainless steel, and is designed to fully test and fill the bottle with no pressure loss. Should a defective bottle explode during the testing or filling, there would be no danger to employees or visitors as the filler is fully shielded. In addition, employees wear plastic shields over their faces as protection in the event that a bottle might drop and break. The automatic filler can be operated at whichever of two speeds is most desirable. Usually 22 "fifth" size bottles are filled each minute while 24 "tenth" size bottles are filled in the same length of time. These are the only sizes now being used by ITALIAN SWISS COLONY as a general rule for sparkling

wine, although other sizes have occasionally been filled for special orders. After filling, the bottle is placed on a conveyor which takes it on to the corking machine. There is no appreciable loss of pressure from the open bottle during this brief interval as the low temperature plus the gentle filling procedure leave the champagne "quiet" after filling the bottle. It is interesting to note here that earlier type champagne fillers did not permit complete absorption of CO<sub>2</sub> into the wine and required a somewhat complicated process whereby the operator of the machine had to insert his thumb over the bottle opening as it was passed to the corker so as to hold the sparkle in the bottle. It is obvious that this new machine has the advantage of being more sterile as well as more efficient.

ITALIAN SWISS COLONY has been using modern polyethelene "corks" or closures for several years in preference to the older corks. These new closures provide a much better protection against possible loss of sparkle than did the wood corks as they are completely non-porous, whereas the older corks would occasionally permit part or all of the carbonation to escape or leak out through the pores of the cork, even though they were carefully made of several layers of cork of differing grains, each glued to the next so as to eliminate as much as possible the chance that a pore would extend through the entire cork. The polyethelene closures used by ITALIAN SWISS COLONY have been especially designed with an extra pressure ridge to lock all sparkle in the bottle even under the pressure extremes found at high altitudes, and yet can be easily removed from the bottle when ready for use. This feature came about after extensive use and experimentation on Western Air Lines famed Champagne flights on which ITALIAN SWISS COLONY Champagne is exclusively served. These closures are pressed in by a special machine under the eye of a skilled operator who inspects for any flaw in the closure or any possible source of pressure loss. The bottle is replaced on the conveyor and passed on to another machine which locks a wire hood or "agriffe" over the closure and around the neck of the bottle to insure that the cork cannot loosen until such time as the wine is to be used. Again we might note that special handling once required to keep the older wood corks moist and "live" is no longer needed. The new polyethelene closures tightly lock all sparkle in the bottle regardless of the position of the bottle.

After sealing and wiring the bottles are picked up by the neck by a special conveyor and are carried into a water bath to be moved back and forth as the water temperature is gradually increased. The bottles, at 22 degrees F. are dipped into water at 48 degrees F. and exactly five minutes later are removed from the far end of the water tank from water at 90 degrees. The bottle temperature will have been brought up to between 64 and 68 degrees, at which point the labels can be applied

(after the damp bottle is passed through a warm-air blower which thoroughly dries it) without danger of condensation to soil the labels. To accomplish this labeling is the primary purpose of the water tank but there are other reasons for it's use. One important point is that the quick rise in temperature will cause any bottle which might become cracked or weakened in filling or sealing to burst while safely under water rather than possible later in the case. Also, any wine which might have spilled on the bottle during filling is washed off, leaving a more attractive package. Labels and neckbands are put on by machine with the gold foil; final bottle polish and inspection and tissue paper wrap being done by hand to insure a neater and more attractive package. Furthermore, the individual tissue paper wrap of each bottle guards against possible damage to the label during shipping.

Bottles are carefully packed in extra strong cases which are then stored in the champagne cellars for a period of from three to six months during which time (often called the "marriage" period) the final aging and stabilization of the champagne takes place and the quality of the wine develops to the utmost. There will be, of course, an occasional sample taken from each lot to be analyzed and tasted by the laboratory experts, not only of the finished champagne but also from each operation starting with the selection of the grapes in the vineyards. The champagne department output may be as much as 600 cases daily, while the usual output is about 2000 cases weekly. Although the most widely known label is ITALIAN SWISS COLONY, sparkling wines are bottled at Asti under several other Allied Grape Growers labels. Soil and weather conditions at Asti are more favorable for the production of quality sparkling wine than at Escalon, Madera, Lodi, or Fresno where other Allied Grape Growers wineries are located.

#### DISTILLERY

At one time beverage grape brandy was distilled here at Asti. At the present time, however, our brandies are distilled in our winery near Fresno where the grapes needed for beverage brandy can be most economically grown. Our distillery at Asti is used to recover alcohol from our wastes. Through our distillery we recover over 100,000 gallons of alcohol each year from such waste as pomace (grape seeds, skins, and pulp after fermentation), lees (sediment which deposits on the bottoms of tanks containing aging wine), filter wash, and the occasional tank of wine which our quality control sets aside as not meeting the strict standards of quality which we have set up. Were it not for this distillation, such alcohol would be lost entirely, as we do not re-use the waste in the production of so-called "second-run" wine. The alcohol which we recover, called "Spirits Fruit Grape" or "Neutral Spirits", comes from our stills at about 190 proof (95% pure alcohol). We have two stills, each about 60 feet high. The lower column (called the "Beer" column), is used for the first distillation where the wastes (called Distilling Materials or "Dismat"), are

thoroughly cooked by means of steam coils at the still bottom. The resulting vapors are redistilled in the upper "Rectifying" column. This is known as double distillation and is possible because spirits will vaporize at lower temperatures than will water, while any impurities generally vaporize at an even lower temperature than spirits. By carefully controlling and varying the temperatures in the columns the vapors can be separated and condensed back into liquid form in such a manner that there is almost complete separation of spirits, grape water and impurities. These last go back into a tank known as "Heads & Tails" and are redistilled. Eventually any residues are destroyed as waste. Spirits are placed in tanks and locked by the government, (Federal seals are placed over the keyholes) and for the most part, are later shipped to our Clovis plant under bond to be used in WINE SPIRITS ADDITION in the production of sweet wines. Occasionally these alcohols are sold to be used for industrial or commercial uses. The Federal Government will keep a careful control until all taxes due (presently \$21.00 per proof gallons) have been paid. The final grape water and solids are flushed through a drain to a settling pond. Eventually the solids will be composted and will return to the vineyard soil in the form of fertilizer.

#### BOILER AND POWER ROOM

In Asti's boiler room there are four Kewanee fire tube boilers in which the fire rather than the water passes through the tubes. These produce a maximum total horsepower of about 900; normally only one boiler is in use, producing up to 225 H.P., but in periods when the distillery is in operation, two, three, or if necessary all four may be used. Boilers produce steam at about 125 lbs. pressure for use in the stills to heat distilling material to vapor form. Steam is used throughout the winery for heat, to sterilize tanks and equipment to operate steam pumps, and for the rare but occasional operation of the pasteurizer.

#### CRUSHERS

ITALIAN SWISS COLONY owns about 2000 acres of land at Asti, about 800 acres of which is now in productive vineyard. We produce about 1500 tons of grapes annually on these lands, although this figure will raise as time goes on, as the present improvement program progresses. At the present time much of our vineyard is planted in young vines which have not yet reached their peak of yield. We are embarked on an endless program of vineyard management which will, within a few more years, bring our land to its most efficient level of long term productivity. Our viticulturists have carefully laid out a master plan where our vineyards have been marked off into over 200 separate blocks and each of these is gradually being planted with the type and variety of grape most suited to that particular plot, keeping in mind such important features as sunshine, moisture, drainage, prevailing winds, chemical makeup of the soil, etc. We have determined that we have nine different types of soil on our own land and each seems to "take to" different varieties of grapes in various ways. Modern knowledge has shown us that our forefathers occasionally un-

knowingly planted varieties of grapes in certain soil conditions where other varieties would have been much better suited. Our program of replacement of old and unsuited vines has progressed to the point where we are now replanting about 60 acres each year, replacing the old vines with the most suited type for the particular plot being considered. At this rate we will have replanted our entire vineyard within a very few more seasons with vines which will insure the finest quality of grapes for many years to come. Most grape varieties reach good productivity in about 7 years after planting and continue bearing well for about 40 years.

In addition to the planting and included in the vineyard management program is a carefully controlled plan whereby eight different selected commercial fertilizers and high nitrogen content pomace are being used as soil stimulants in connection with off-season cover crops. Also, within the last several years a program was instigated utilizing rotational light sprinkling of the vines during the heat of the summer, not as an irrigation, but rather as an aid in keeping the vine and leaf growth in most healthy condition to shade and protect the growing bunches of grapes. Properly controlled sprinkling, we have proven, can allow more evenly matured grapes, more usable sugar content, better acid content, and fewer bunches which must be rejected as sunburned, unripe or overripe. All this can be accomplished without risking the loss of quality which is often associated with true irrigation. In addition to the grapes which we raise on our own land, we also purchase approximately 20,000 to 30,000 tons annually from private growers in this area, some independent, most members of the Allied Grape Growers Co-Operative. We still usually receive from 40 to 60 different varieties of grapes each season. There are, incidentally, over 1500 known and cataloged varieties of grapes.

Our harvesting season usually starts about the 10th of September and continues until the end of October. During this short six weeks we will see perhaps 25,000 to 35,000 tons of grapes brought in to our crushers with as many as 100 tons per hour at the peak of the rush. The crushers can handle them easily. The crushers should perhaps better be called "separators" for they do not actually crush the grape but instead separate the leaves and stems which are removed by underground conveyors and trucks to be saved and later converted into fertilizers for the vineyards. The grape berries are split open so that the juice is free. Samples of the grapes are taken at crushing time and the analysis taken thereof will help determine the type and quality of wine which will eventually come from that particular quantity of grapes. The crushed grapes (called "MUST") are pumped into the fermenting room through overhead pipe lines, there to be diverted into any of the many fermenting tanks by means of an ingenious arrangement of valves; each of our three crushers is capable of handling as much as 50 tons of grapes in a single hour, should the need arise and we have at times crushed over 1000 tons in a single eight-hour day. The crushers have been the subject of several articles in prominent

industrial design publications since their construction in 1957, as they are not only the most modern in use in Northern California but also are gaily and gaudily painted in a multicolored scheme planned to provide pleasant and colorful working conditions and to minimize the danger of industrial accidents.

#### FERMENTING ROOM

Our fermenting room, the room in which the grapes actually convert into wine by means of nature's system of changing the grape yeasts and sugars into alcohol and carbon dioxide, contains 70 tanks varying in size from about 10,000 to 42,000 gallons and with a total capacity of almost one and a half million gallons. This much wine can actually be fermented at one time, and since the period of fermentation takes only from about 5 to 15 days normally, each tank can be used several times in a single season. Time of fermentation will vary, depending on such influences as temperature, type of grape, sugar content, kind of wine, etc. The newly crushed grapes, called "must", are pumped from the crushers into the fermenting tanks and fermentation starts almost immediately. Sugar is never added, but if necessary, in order to insure properly controlled and complete fermentation, a little yeast may be added. These yeasts are carefully cultured here in the winery, the original pure strain being called *SACHROMYCES ELLIP\* SOIDEUS* (pronounced "sack-row-my-seas ellip-soy-dee-yoos) and being the most desirable of the many types of yeast found in natural state on the grape. Artificial coloring or flavoring is never added, all flavor and color of the wine coming from the blend of grapes used. Water is never added, pure juice of the grape only being used to make the finest wines.

Fermenting tanks have screened vents at the tops so as to allow  $\text{CO}_2$  to escape as it bubbles out of the fermenting wine. In winemaking we have what is called "bottom fermenting" and there is a continuous working, a vigorous churning starting at the bottom of the tank which gradually subsides as fermentation progresses towards completion. Fermenting tanks are equipped with built-in cooling coils in order to control temperature, since some heat is generated within the wine as fermentation progresses and must be controlled in order to produce wine of best quality. In the production of "dry" wine, all of the natural grape sugar is allowed to ferment out until none remains and fermentation ceases for lack of sustaining food. By properly selecting grapes of the correct sugar content, the amount of alcohol in the wine is controlled, since there is a definite relationship; 22% sugar in the grape will give 12% alcohol in the wine. Because of the comparatively lower alcoholic content (12%) in table wine, much more care must be given it than sweeter wines during each stage of its production and handling, not only by those in the wine and allied industries, but also by the consumer. Sweet wines are inherently more stable because



of their somewhat higher alcohol content, (20%). In the production of sweet wines fermentation must be halted before it reaches its completion so that some of the natural grape sugars are kept in the wine. This condition of arrested fermentation is accomplished by a process whereby a measured quantity of pure grape brandy is added to the fermenting wine when the sugar content in that wine is exactly high enough to provide the desired amount of sweetness. Enough brandy is added to bring the total alcoholic content of the wine up to 20%, thereby immediately halting fermentation since none can take place where more than 17% or 18% alcohol is present. Incidentally, the brandy used for this process is of much higher proof than beverage brandy, usually being from 187 to 191 proof. The use of such extremely high proof brandy is desirable since it influences the taste of the wine to a much lesser degree than would brandy of lower proof. The principal reason for the general standard of 20% alcohol in sweet wines is that this amount guarantees a completely stable wine where no further fermentation could develop in the bottle to possibly change or alter the wine.

After a bottle of sweet wine has been opened it can safely be kept for many months and there will be no change in the wine, whereas a table wine should be consumed within a few days to a week after the bottle has been opened since certain bacteria from the surrounding air will enter the wine and will cause a gradual chemical change which the lower amount of alcohol cannot keep out for long.

There are a few special types of sweet wines which are produced with lower than 20% alcohol, these wines mainly being used for sacramental or religious purposes or to comply with certain laws and regulations in a few states. Usually these wines will have only about 13% alcohol and the stability of the wine is maintained by pasteurization. Although ITALIAN SWISS COLONY does produce a few wines of this type for sale only in a few states, we generally prefer to avoid pasteurization as it has a tendency to deaden flavors somewhat. The use of refrigeration (which will be discussed later) in the stabilization of wine is becoming more extensive and is usually preferable to pasteurization. This, coupled with the process of Arrested Fermentation, best guarantees that the richness of the grape becomes part of the wine, that the wine remains rich in the fruit vitamins (B & C) and minerals, and that the components essential to a quality wine remain in proper balance. When fermentation is finished the new wine is placed in wooden vats for aging after first being passed through strainers which remove the seeds, grape pulp and skins, all known as "pomace." These are left in the wine during a part or all of fermentation since much of the flavor and most of the wine's color comes from the solid part of the grape rather than the juice. After the pomace is separated it is passed through hammermills and presses which remove all liquid. The solids

are taken to the compost heap to eventually be used as fertilizer, and the liquids taken to the distillery for recovery of alcohol.

#### WINE CELLARS

There are at present 14 wine cellars at Asti in which the aging of wine takes place. There are many types of wine aging at Asti, sweet wines as well as dry, but generally the dry wines ONLY are fermented at Asti while the sweet wines are produced in our other wineries at Escalon, Lodi, Fresno and Madera and are shipped to Asti via stainless steel tank trucks for final aging, blending, bottling and shipment. The soil and weather conditions in Northern California are considered to be among the finest in the world for the growing of quality grapes for TABLE WINES, but the heat of California's central valleys, plus certain soil differences, make that an area usually considered to be superior for the growing of finest grapes needed for sweet appetizer and dessert wines. This condition is much the same as exists in Europe, where, for example, the famed burgundies come from the district in France after which they were named while the finest sherries come from a different region entirely, (Spain). With this in mind we limit the kinds of wines produced in each of our wineries to those which will be of most outstanding quality and most typical of the district in which the winery is located. This has proven to be good strategy, being one of the principal reasons why ITALIAN SWISS COLONY has won more awards and medals in the past twenty five years than any other wine company. Another most important reason for this record is the fact that all wines at Asti are aged in wooden tanks (redwood or oak) in spite of a fairly general trend towards the use of metal or concrete aging tanks on the part of many wine companies. Although wine will age in materials other than wood (it is the only alcoholic beverage which does), we at Asti hold to the traditional belief in wood as being the container which gives the finest aging. Unfortunately the cost of wooden tanks originally and their high maintenance costs are somewhat higher than that of metal or concrete tanks. Redwood is the most widely used wood, being particularly desirable from a viewpoint of size. Redwood trees grow to be well over 250 feet and from them we get long perfect staves which are free of knots and defects. These staves are made from the most select pieces of lumber (called "tank Stock"), and are processed by being passed through a series of acids and detergents and baths which remove all wood coloring and wood flavor which might later affect the wine. Proper preparation of such new wood before wine can be placed in the tank sometimes takes a year or more, such preparations being done by the "Coopers" or barrelmakers who supply the tanks. Tanks are disassembled after they are finished and are brought to the winery in pieces which are reassembled on bases in the wine cellars. Aging tanks are completely

covered and are equipped with hatches or manholes through which they can be entered for cleaning, repairs, or maintenance.

Redwood has excellent insulating and lasting qualities, a fact that is evidenced by the fine condition of many redwood tanks which have been used at Asti for as long as 65 years. With continued good care there is no reason why they should not last hundreds of years. This longevity hardly compares with that of oak tanks though, there being oak tanks in use in Europe today which are over 1000 years old. Oak has other advantages over redwood in that it is extremely strong and tanks made of oak require a minimum of maintenance, but it has the great disadvantage of being a type of wood from which it is impossible to obtain long staves and therefore the size of oak tanks is limited. At one time we made extensive use of white oak casks and tanks and still have many such containers in the 400 to 3000 gallon sizes, but with the growth of the company came a need for larger tanks (up to 70,000 gallons).

One most important advantage of redwood is the fact that it is easily and plentifully available here in the west, whereas the suitable white oak must be shipped in from the east and is not too plentiful. There is one fir tank in the winery (Tank No. 397,--21,458 gallons), in the old filter room, which is notable in part for the fact that it was originally intended and built as a storage tank for beer. Fir has no particular advantages, being neither as strong nor as large as redwood, and is rarely used for tanks. While wine rests in a wooden aging tank, it "breathes" through the walls of the tank to a certain extent. Contrary to general belief wine does not continue to improve forever as it ages, but generally it improves rapidly at first, then more slowly, and finally reaches a peak or plateau where no further improvement is apparent. It is possible to over-age wine, and some wines can be harmed by being allowed to grow too old before being used. There are cases where wines have actually lasted thousands of years, but in most instances wine is meant to be used at the best age for the particular wine. This best age for any given wine will depend on many factors. Our chemists and wine tasters take samples from each tank frequently and taste and analyze the aging and aged wine while carefully considering it from many angles. Their ultimate aim is to allow the finest quality wine possible in the finest maturity to reach the consumer, keeping in mind the economics and conditions of the times. Obviously, not all consumers are interested in wine of the same quality and price range and ITALIAN SWISS COLONY offers wines under many labels, types, and qualities, so as to provide the finest quality wine possible in the medium, the upper medium and the premium quality price fields throughout the country. No effort has ever been made by this firm to invade the limited market in demand for low priced and low quality wine, this field being best left to others.

One of our most interesting wine cellars is referred to as the "Sherry Room" for the simple and understandable reason that years ago and for many years it was used solely for the aging of sherry. Sherry is one of the several wines which passes through a special process called "cooking" or "baking". Others are Marsala and Tawny Port. This process

in which the temperature of the aging wine is varied and controlled (never getting above 120 degrees) by raising and lowering at intervals causes the NATURAL GRAPE SUGARS to partially convert into caramel and gives the traditional nutty flavor (known as "Rancho") peculiar to those wines. We no longer produce these wines at Asti, the necessary grapes being grown in the Fresno area. It is more efficient to produce these sweet wines at our La Paloma winery than it would be to continue the old practice of shipping the grapes to Asti each season, as was the case prior to the time of the purchase of the winery in Clovis.

Another of our more interesting wine cellars is one which is referred to as the "Redwood Forest". This room contains 74 tanks ranging in capacity of almost 1,000,000 gallons total, individual tanks ranging from 4,000 to about 16,000 gallons. Another cellar (called the "Bently Building") has 1,110,433 gallons in 48 large tanks, while still another (called "Old Shipping Room") has over 2/3 million gallons of wine in just 12 tanks, the least of which holds more than 50,000 gallons. One of the most fascinating and historical wine cellars at Asti is the famed "POMPONE". This cellar is part of the original winery building constructed in 1887 using stone and mortar typical of those days. Several of the original aging tanks used first in 1887 are still in use in this and other cellars. The word "Pomponne" can be translated from the Italian to mean "Pump Room," the cellar at one time being the site for the large main steam operated pump which was used to move wines from one cellar to another. Today we use many smaller more portable pumps, located at various places throughout the winery, for the purpose of moving wine. We also have a network of many miles of stainless steel, plastic, glass and aluminum pipe which connect the various buildings and parts of the winery, for the purpose of moving wine quickly and safely. Pomponne is now used as an aging cellar only, and is frequently a resting place for dry white wines in particular, since the semi-underground construction of this cellar is well suited to provide the even cool temperature needed.

At the end of this cellar is the entrance to a 200 foot long tunnel which leads into the famous "Largest underground wine tank in the world" which will be discussed later. In total capacity our wine cellars hold over 9,000,000 gallons. Although the greatest part of this total is made up of wooden aging tanks, there are many tanks throughout the winery made of such materials as stainless steel, porcelain-lined steel, and concrete. These tanks are generally used for such purposes as fermenting, refrigeration, temporary storage, blending, etc., while the great tanks of redwood and oak serve best for aging. The Asti winery of ITALIAN SWISS COLONY has the largest total of WOODEN COOPERAGE of any winery in the world.

#### REFRIGERATION AND FILTRATION

Just inside the entrance to the refrigeration and filtration department (often called "Machinery Hall") is located the largest single redwood tank in the winery which has a capacity of 72,423 gallons. Across the large and spacious room are five refrigerating units, four of which are used for the purpose of chilling or cooling wine as needed, while the fifth is operated constantly to keep the "cold room" as it is called, at a steady and constant temperature of 22 degrees F. This "Cold room" adjoins machinery hall and contains

32 tanks, most of which hold about 15,000 gallons each, though a few are about twice as large. The total storage in this room is over one-half million gallons.

Wines are occasionally refrigerated for several reasons; principally because wine is best stabilized by cooling, and also as a means of precipitating tartrates. There is a certain amount of tartaric acid in wine, just as there is in all fruit. The presence of some tartaric acid will not noticeably influence the flavor but could, under certain conditions and circumstances, possibly affect the appearance and clarity. When wine is thoroughly refrigerated this tartaric acid will crystallize and the crystals will settle to the bottom of the container, or tank. Later the wine can be removed and the tartrate separated either by filtration or by leaving the last few inches of wine (which will contain the settled tartrates) in the tank as the wine is pumped out. Anyone who has seen home-made grape juice which has been left in a refrigerator for awhile will have seen the tartaric acid crystals. Our main purpose in removing them using refrigeration and filtration is merely to guarantee the most attractive appearance to the wine that is possible, although the recovered crystals are often sold to the makers of baking powder, cream of tartar, dyes and munitions. Presently most tartrate comes from Europe, Africa, and South America. Our refrigerators are of ample capacity to take care of any emergency, being able to lower by 40 degrees as much as 4000 gallons of wine in a period of only one hour.

A newly fermented wine is extremely delicate. Persons making wine at home occasionally experience a spoilage or souring of the new wine shortly after fermentation is finished, mainly as a result of the presence of certain bacteria and undesirable yeasts. If it is possible to allow the new wine to rest for a short period at a low temperature the wine will quickly stabilize and will remain afterwards in a more durable condition with no apparent changes otherwise. Dry wines are usually chilled to 24 degrees F. for stabilization but such chilling must be carefully controlled, as dry wine will start to freeze (or slush) at 22 degrees F. Sweet wines with their higher alcoholic content can be safely chilled to between 10 and 12 degrees, depending upon the sugar content of the wine and is usually stabilized at 18 degrees. The cold room is also used as a place in which to ferment certain dry white wines as some ferment best at lower temperatures, occasionally as low as 40 degrees. The filters which are located in the wine processing room are used to remove mineral particles, sediments, fruit fibers, etc., from the wines. We use various types of filtering materials and agents; stainless steel screens, paper and cloth pads, asbestos pads, and a type of powdered white rock which was formed centuries ago by deposits of shells of millions and millions of tiny marine animals. This material, called diatomaceous earth, is completely inert and filters by forming pads against the screens through which wine is forced. All pump parts, lines, pipes, etc., are made of glass, stainless steel, polyethylene, or aluminum, since wine could deteriorate were it to come into contact with other metals. Wine should never come into direct contact with iron or copper as it would probably take in a certain metal content which might later affect the flavor and the appearance. Our main filters have a capacity of about 3000 gallons

per hour. There are over 600 square feet of filtering surfaces through which wine passes. There are additional final polish filters in our bottling department through which all wines are passed just before entering the bottles.

#### LABORATORY

Wine chemistry is a highly specialized art which requires much training on the part of those who practice it. There are seven graduate wine chemists at Asti, men who have trained in leading American Universities as well as in European schools rated among the best in their field. The competent wine chemist must have a background in such subjects as Enology, Viticulture and Food Technology and must develop skill in the art of actual wine tasting. Supplementing these chemists is an experienced staff of technicians. There are two main laboratories at Asti, one devoted strictly to research and quality control with some emphasis on new product development, and the other being primarily concerned with plant production control. In this latter laboratory, which is completely up to date in all respects and equipped with the most modern technical aids available, the wines are carefully watched, starting with the grapes in the vineyards and continuing through all stages of production such as fermentation, aging, blending, bottling, and even through the eventual shipping for distribution to the consumer. The vigilance of the chemists and winemasters insures that completely sound wines of highest quality eventually reach the bottling stage. During a wine's development it must be frequently analyzed and tasted, samples from the aging tank being taken as often as weekly, and never with more than 60 days passing without analysis. Such influencing factors as stability, heat, cold, acids, alcohol (maximums and minimums are set by law), color, grape sugar, etc. must be carefully considered by the chemists and technicians responsible for maintaining the famed ITALIAN SWISS COLONY quality.

In addition to the main two laboratories, there is an additional smaller one in the bottling department which is primarily concerned with quality control at bottling time.

#### HALF MILLION GALLON WINE TANK

This famous tank was constructed in 1897, a year in which a bumper crop of grapes promised to bring the first really large production of wine to the struggling new company. The tank originally held about a half million gallons (equivalent to a glass of wine for 16,000,000 persons). Its capacity was reduced after the earthquake of 1906 which ravaged Northern California causing extensive damage to the tank. It was rebuilt in 1910 and was strengthened by the provision of thicker reinforced walls and two bulkheads across the middle which now allow the use of the entire tank, one third, or two thirds as might be needed at the time. Today the total capacity is 300,296 gallons, each of the three sections holding almost exactly 100,000 gallons and being about 20' high x 29' long x 24' wide. The overall

tank top measures 33'3" x 80'4". The top is decorated by a coronet made of stone from which a sign proclaims the "World's Largest Underground Wine Tank." In the year 1899, to celebrate the final completion of the tank, a dance was held inside it, the 50 or more couples entering through a tunnel starting from the "Pompone." There was also a military band, and the rumor still persists that the dance continued for two days and three nights.

Today the tank is used mainly as a blending tank. Wines, like most other beverages, are a blend. Wines from different grapes and different vintages are blended together to provide a properly balanced wine in which are present all the qualities of flavor, aroma, color, clarity, body, etc. Grapes will vary somewhat from vineyard to vineyard, because of slight soil, sunshine and moisture differences, and proper blending is absolutely necessary so that finished wine of uniform and consistent quality is produced. Proper blending is a major part of the work of the winemaker, whose keen palate and extensive experience and training serves to set an example to the staff of experienced men and women working as chemists, technicians, quality control experts, food technicians, etc., who bear the responsibility of producing quality wines.

#### BOTTLING EQUIPMENT

Adjoining the main bottling room at ITALIAN SWISS COLONY at Asti is a large warehouse for cased wines. Just as any retail storekeeper must keep a supply of his merchandise on hand and ready for sale, so must we keep a quantity of each of our products on hand, bottled and cased and ready to be shipped at any time upon receipt of an order. The orders received at Asti are large ones, often for many thousands of cases, for we ship to large wholesalers and state liquor control boards rather than to individuals or to retailers. Names on some of the 25 foot high stacks of wine indicate that orders are being assembled to go to any of the 50 states or to any of numerous foreign countries. When the order is ready for shipment it may leave Asti via rail or by trucks, the latter usually for West Coast shipments while the North Western Pacific Railroad connects with Southern Pacific for general distribution over most of the nation. Much wine is shipped to the port of Stockton in large stainless steel tank-trucks to be transferred to the S.S. Angelo Petri and later carried to our bottling plants in the east. Certain wines are bottled at Asti when the order is received, while other wines are bottled many weeks before shipment. There are usually about 300,000 cases of wine in the warehouse at Asti. About 20,000 to 25,000 cases are shipped out on an average day, while as many as 35,000 have gone out under emergency circumstances; there are seasonal peaks in the use of wine---for example at Thanksgiving or Christmas. At the present time there are by actual count over 900 items being bottled, cased, and shipped from Asti. There are 73 different kinds of wine bottled under about 60 different labels and in up to 9 different sizes of wine bottles, plus certain differently shaped bottles. Obviously, it is necessary that our inventory be large in order to keep a few



of each item on hand. The various and different labels generally designate the different qualities, types, or distributions of the wines. The popular label is, of course, the ITALIAN SWISS COLONY label, although such names as TIPO, LEJON, ASTI, and HARTLEY are well known throughout the country as being products from ITALIAN SWISS COLONY.

Extreme care must be given each order, particularly in view of the differing rules and regulations which exist from one state to the next regarding even such seemingly trivial matters as shape of the bottle, or size of lettering on the label. Many states require that stamps be affixed to each bottle, such stamp indicating that the state tax has been paid. Federal serial numbers on each case are printed, this serial replacing the green federal stamps which were used until 1955. There are 10 main bottling lines, the term "line" meaning the complete unit and group of machines through which a bottle passes in being cleaned, filled, sealed and packaged. Although most of the work is done mechanically, there is still much hand labor needed to empty the cases of bottles, inspect the bottles and machines, affix stamps and seals as necessary, etc. All bottles are new and are delivered from glass factories in the San Francisco bay area via trucks each day. It is necessary that we keep a standing inventory of about 80,000 cases of empty bottles on hand at all times. Corks are still used as stoppers in bottles of certain table wines, but their use is declining gradually as more modern types of pilfer-proof aluminum closures are developed. Generally speaking, we use a cork for the more select quality table wines mainly because it is traditional to do so, while special aluminum caps with inside cork liners are molded to the threads of the bottles of other wines, forming screw caps. Wine to be bottled is pumped from the wine cellars to the bottling department at least 24 hours before actual bottling is scheduled and is placed in any of ten stainless steel tanks in a room adjacent to the bottling room. (Seven of these tanks hold 5,000 gallons and three hold 1,200 gallons.) Wine is allowed to rest in these tanks while any foam or froth from pumping dissipates and also to allow ample time for complete final analysis and quality check before the last polish filtering and bottling takes place. At bottling time the wine is passed from the stainless steel tanks to the filling machines through a final polish filter, through clear pyrex pipes which lead to each of the eight main bottling lines. The first or "A" line is set for the standard "fifth" (1/5 gallon) size bottle and handles 7200 cases daily on each eight hour shift. The second, or "B" line is used to fill the standard round tenth (1/10 gallon) bottle and handles 3000 cases each shift. "D" line, with a capacity of 4000 cases per shift, is used for the filling of fifth and quart sized bottles. "E" line fills 2000 cases of gallons per shift while "F" line, used for 1/2 gallons, fills about 3500 cases per shift. "G" line is generally used for the unusually shaped bottles (such as the famous TIPO Chianti raffia wrapped container) which by nature of their construction present problems for handling. Although the construction of these bottles does make for somewhat slower filling, this line can handle 1200 cases per shift. "H" line is merely a long table with an endless belt travelling its length where various

hand labeling and stamping work is done. The final two bottling lines are located downstairs from the main bottling department in the ASTI BRAND cellars and are used for the purpose of filling the Tipo 2 ounce salt and pepper sets, ("I" line, 100 cases daily) and the premium quality ASTI BRAND table wines ("J" line, 500 cases per shift). As of the time of this writing the normal daily output of cased wines from the entire main bottling department, exclusive of the champagne and brandy departments, is approximately 25,000 cases each working day.

As ITALIAN SWISS COLONY has grown, so has the need for greater bottling and shipping facilities. In 1959 over 300,000 dollars was spent in enlarging and improving these sections. As of this writing plans are under way to provide additional warehousing space and still more new bottling equipment of the most modern design.

#### BRANDY DEPARTMENT

The first brandies produced by ITALIAN SWISS COLONY came from the original winery at Asti before the turn of the century. In the year 1942 the entire brandy distilling, aging, and bottling operation was shifted to the company's La Paloma winery in Clovis, California, on the outskirts of Fresno. One important reason for this shift was because of the availability in quantity at reasonable prices of the necessary varieties of grapes for beverage brandy in that area. For the next 13 years the well known LEJON and HARTLEY brands of brandy were produced in the valley wineries of ITALIAN SWISS COLONY.

By 1954 it had become necessary to return a part of the brandy operation to the Asti plant in order to better consolidate shipments of brandy along with wine to our customers. Several buildings were reconstructed and adapted to the specialized handling of spirits, both for storage and for aging. Although distillation of brandy would still take place at the Clovis and Lodi wineries, aging and bottling of brandy at Asti was resumed in 1955.

Brandy is brought to Asti in two ways. Some, after distillation in the valley wineries from carefully selected wines, is partially aged in plain oak wood barrels for a period of time and is then brought to Asti immediately after distillation, arriving in stainless steel tank trucks and cars under government seal and bond. At this stage the brandy will be somewhat higher in alcoholic content than is the case with bottled brandy. Although the greatest public demand is for beverage brandy of about 84 proof (42% alcohol) it is most practical and economical to age brandy at somewhat higher proof and then reduce the proof as necessary at time of bottling. Furthermore, federal laws are such that if brandy were aged at less than 100 proof the eventual taxes to be paid would be based on a minimum of 100 proof. Rather than pay the tax for 100 proof brandy (about \$10.50 per gallon) while only 84 proof brandy is involved, it is the general practice to age brandy at slightly over 100 proof. The brandy which is brought to Asti in bulk goes through a process called "Barrelling down" whereby it is removed from the bulk transport tank under the careful scrutiny of the Federal agent who is permanently assigned to duty

at Asti, is measured and placed in plain oak barrels which are then taken into any of the aging cellars described below. Since distillation is done during harvest time in the valley this "barrelling down" will usually take place during the months of September and October. Barrels must be re-coopered, sterilized, properly marked and carefully checked for leaks before the brandy is received. During the actual barrelling down about 250 barrels are processed daily. After filling, they, plus any filled barrels brought in from the valley wineries, are weighed and inspected for leaks and are then placed under government lock and key in any of the several large buildings set aside for the aging of brandy only. The largest of these buildings, (Unit A) has a capacity of about 9500 barrels, another (Unit C) holds about 2500, while the last, (Unit D) holds about 3000 barrels, making a potential total of about 15,000 barrels or 750,000 gallons, which at 105 proof represent an eventual federal tax over \$9,000,000. In actuality, however, there will be a certain percentage of gradual evaporation and absorption or shrinkage and the actual amount of brandy after aging may be as little as 40 gallons in the barrel which originally held 50.

The buildings in which brandy is aged are kept locked and sealed at all time by the Federal Government through the Alcohol Tax Division of the Department of Internal Revenue and can be opened only by a government agent. It is necessary that this agent, known as a storekeeper-gauger, be present whenever brandy is in the process of transfer from one building to another until all tax has been paid. There is a storekeeper-gauger permanently stationed at Asti as the extensive operation here is more than enough to keep a man busy on the government's behalf. Occasionally it is necessary that extra gaugers come to Asti for a day or so during periods of peak activity. Their work entails more than a mere check on tax---(if millions of dollars can be referred to as "mere"), for the interests of the government as regards quality are very strict.

Usually brandy is between four and eight years of age at the time of bottling. Brandy, unlike wine, will not age after bottling. When we are ready to bottle the aged brandy the barrels are brought to a "gauging room" (usually in quantities of 100 barrels at a time), opened, and the brandy is drained out and placed in a special 5220 gallon stainless steel "gauging" tank for measurement and for an accurate computation of the exact amount of alcohol involved. From this figure we then determine the tax (the present rate is \$21.00 per gallon of 200 proof alcohol and usually amounts to about \$46,000 for the 100 barrels) and is turned over to the storekeeper-gauger by check to the District Director of Internal Revenue. The brandy is then pumped into processing tanks in our rectifying and brandy bottling room, is reduced in proof to about 86.5 for stabilization (brandy stabilized better at lower proof), and is refrigerated. During the stabilization period a small amount of filter aid material is added to the brandy to assist in removing precipitates, tannins from the wood barrel, sediments, etc. The next steps are to pass the brandy through a coarse filter, bring it back to normal room temperature (or slightly below), pass it through a polish filter, and then pump it into the stainless steel bottling tanks above the brandy bottling

line for final reduction to an exact 84 proof (there is an occasional bottling at 80 proof done in the same manner.) Bottling is done by gravity, the capacity for bottling being about 1100 cases of fifths in 8 hours. There is a certain demand for 100 proof, Bottled in Bond brandy and this must be handled in a slightly different manner than other beverage brandies because of the higher proof, the different requirements of tax payment, and the more involved control by the government which is continued through the entire bottling operation. When preparing Bottled in Bond brandy the barrels are brought to the gauging room and opened and drained, the brandy is pumped into the Brandy Bottling department at about 105 proof and cut in proof to about 102 by the addition of distilled water and stabilized. Only distilled water can be used in lowering the proof of B.I.B. 100 proof brandy whereas under certain circumstances sherry wine can be used to lower proof of unbonded brandies. After the stabilization and filtering procedure has been completed, the brandy is cut to exactly 100 proof (by law any Bottled in Bond Beverage must be 100 proof and must be at least 4 years of age) by adding a little distilled water, bottled under strict government control, and placed back in a bonded warehouse until such time as the tax may be paid. Taxpayment of Bottled in Bond Brandy is made at the time of removal from the "In Bond" warehouse for shipment to the distributor.

Occasionally ITALIAN SWISS COLONY has been asked by certain distributors to bottle products other than wine and brandy. Although our first efforts are towards the proper handling of our own products we have found time to accept for BOTTLING ONLY a certain amount of Vodka and Gin. These beverages are produced in the east by firms other than ITALIAN SWISS COLONY and are shipped to Asti in steel drums. Filtering and bottling is done using the government approved bottling facilities of ITALIAN SWISS COLONY and the beverages are sent on to the distributor. There are at present very few government approved bottling plants for spirits in the state of California.

#### TIPO BOTTLE WRAPPING PLANT

The wines offered by ITALIAN SWISS COLONY under the TIPO label are the traditional Italian Chianti type table wines and are packaged in the raffia wrapped "fiasco" as has been the custom with wines of this type for centuries. The first Chianti type wines from Asti were produced shortly after the company was established, and the records of awards won by this outstanding wine dates back to the year 1896. For many years the traditional bottles were imported from Italy and were wrapped with true raffia. With the coming of World War II and the closing of trade with Italy we turned towards Mexico as a source of the needed bottles. This proved most unsatisfactory for the Mexican-made bottles were totally lacking in uniformity as far as size was concerned. Bottles supposed to hold a quart were, when measured, often found to be as much as 6 ounces off in capacity. Finally it was decided that American made bottles would be used and the true raffia would be replaced with a more available material. A type of wrapping made from seaweed was imported from China at first, but this in turn gave way to the paper twine developed by the Zellerbach

Company which is presently being used. In our "Tito Plant" we now prepare about 1,200,000 bottles each year, the bottles ranging in size from 2 ounces to  $\frac{1}{2}$  gallon. About 20 women are employed at peak operation.

#### HOSPITALITY ROOM

Visitors have been coming to Asti in increasing numbers since the founding of the first winery in 1887. During Andrea Sbarbaro's tenure, Asti was a favorite stopping place by the nobility of Europe when touring America as well as by many famous from this country. In the early 1930's the first small reception room was erected for visitors and organized tours through the winery were started. The number of annual visitors gradually and steadily increased with each year, reached 10,000 by the late '30's, and by the middle 1950's reached 100,000 persons each year. Now, on a busy summer day it is not unusual for over 1500 persons to come to Asti for a stop in the Hospitality Rooms and a tour through the vast winery. In 1960 almost 5,000 gallons of assorted wines were served to the 200,000 plus guests of ITALIAN SWISS COLONY in the Hospitality Rooms. Guided tours are taken daily, including Saturdays, Sundays and Holidays (with the exception of Christmas, New Year's Day, and Thanksgiving Day) at frequent intervals with as many as 40 tours being taken on busy days. It is, of course, impossible to escort visitors through the entire winery but most of the more interesting sections are shown along the 45 minute route. During the winter months tours are provided between 9:00 AM and 4:00 PM and in the summertime from 8:00 AM until 5:30 PM. The passing tourist is most cordially invited to be a guest of ITALIAN SWISS COLONY in the Hospitality Room and on the tour. Special arrangements for tours can be made by organized groups and a private picnic area is available by reservation for use by such groups. Retail wine sales to the public are made from the Hospitality Room.

#### EL CARMELO CHAPEL -- ("OUR LADY OF MOUNT CARMEL")

El Carmelo Catholic Chapel was constructed in 1907 on land deeded by the Colony to the Archbishop of San Francisco. Funds and materials for construction came from donations from the winery, its employees, and local parishioners who, for the most part, were local farmers and ranchers. The building was constructed in the shape of a large wine cask and over the years it became known the world over as "the Church built out of a wine cask" although this description was not entirely accurate. For the first ten years of its existence the Chapel came under the jurisdiction of the Healdsburg parish, and shortly after the establishment of a parish in Cloverdale in 1917 authority over the Chapel was transferred there. El Carmelo was, and still is, a missionary Chapel. There is no resident pastor or priest, but each Sunday one comes from Cloverdale to celebrate Holy Mass.



Adjoining the Chapel is a parish hall constructed in 1954 which serves as a meeting place for parochial organizations such as Knights of Columbus and Saint Mary's Guild.

By the late 1950's it was apparant that the ravages of time had taken their toll and the little Chapel in the vineyards was becoming unsafe for use. After a great deal of preparation, a new Chapel in the vineyards was constructed in 1960 in a location only a few yards away from the historic El Carmelo. This new Chapel can truly be called "A Church built out of a wine cask" for redwood staves from wine tanks make up about 90% of the lumber used in construction. Old tanks with a total capacity of over 650,000 gallons were donated by ITALIAN SWISS COLONY, and the arched roof alone required over 46,000 board feet of these staves. There is not a single knot or knothole in the entire structure. The new Chapel was constructed along similar lines of architecture to that of the original Chapel but on a much larger scale. Although the new Chapel has not been entirely completed, as of this writing it has been dedicated and Mass is celebrated every Sunday at 9:30 AM. The famed little old Chapel is still standing and a structural study is now under way in hopes that it can be preserved as a historical monument. Both Chapels are open to visitors at any time.

#### ECONOMICAL INFLUENCE

ITALIAN SWISS COLONY at Asti is certainly one of the most important if not the most important industrial plant in the North Bay region. A few statistics from the activities during the year of 1960 point this out readily. To the 350 or so full time and part time employees, over \$1,500,000 was paid in direct wages. This is the largest industrial payroll in Sonoma County. (ALLIED GRAPE GROWERS have over 5,000 employees in all of its operations, not counting the 1400 grape grower members.) The tax bill at Asti alone amounted to an average of over \$40,000 each working day in 1960. Over \$1,250,000 was paid to grape growers of the area for their deliveries to Asti in 1960. Over 1,000 cars of wine were shipped by rail from Asti during the year while over 300 trucks came and went each month bringing supplies and carrying wines away. In the two major wine judging competitions of 1959, the California State Fair and the Los Angeles County Fair, awards given for the various wines produced by ALLIED GRAPE GROWERS represented over 50% of the total gallons of ALL wines which won recognition. ITALIAN SWISS COLONY at Asti is the largest dinner wine producing winery in the world, and in 1960 produced approximately one out of every three gallons of table wine consumed by the American Public.

3/1/1961